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ZWEIFEL, R.

MEXICO

20 JUNE - 24 JULY, 1953

CATALOGUE NOS. 2207-2605

JOURNAL

SPECIES ACCOUNTS

AMPHIBIANS - REPTILES

THE COMPLEAT COLLECTOR

The field man from the Museum of Vertebrate Zoology is an experienced zoologist, trained and equipped to observe, collect, and prepare the multitudes of vertebrate animals which he encounters in his work.

CATALOGUE

R. Zweifel 1953.

Catalogue

1 mi. E Berino, Dona Ana Co., New Mexico

June 23

2207 *Cnemidophorus tigris*
2208 " "
2209 " "

3.8 mi. S Samalayuca, Chihuahua, Mexico

June 24

2210 *Cnemidophorus tigris*
2211 " "
2212 " "
2213 " "
2214 " "
2215 " "

14 mi. NNE Chihuahua, Chihuahua, Mexico

2216 *Sceloporus undulatus*

Rio Papigochic, Miñaca, 6300', Chihuahua, Mexico

2217 *Bufo woodhousi*

June 25

2218 *Cnemidophorus sacki*
2219 " "
2220 " "
2221 " "
2222 " "

R. Zweifel 1953

Catalogue

Rio Papigochic, Miñaca, 6300', Chihuahua, Mexico

June 25

2223	Holbrookia maculata		
2224	Thamnophis	eques	megalops
2225	"	"	"
2226	"	"	"
2227	"	"	"
2228	"	"	"
2229	"	"	"
2230	"	"	"
2231	"	"	"
2232	"	"	"
2233	"	"	"
2234	"	"	"
2235	"	"	"
2236	"	"	"
2237	Thamnophis	sufipunctatus	
2238	"	"	
2239	"	"	
2240	"	"	
2241	"	"	
2242	Rana	pipiens	
2243	"	"	
2244	Rana		(egg mass)
2245	Rana		(series of larvae)
2246	Bufo	woodhousi	

R. Zweifel 1953

Catalogue

1.3 mi N Pachera, 6500', Chihuahua, Mexico

June 26

2247 *Masticophis taeniatus*

1.6 mi W Pedernales, Chihuahua, Mexico

June 27

2248 *Sceloporus poinsetti*
2249 " "
2250 " "
2251 *Sceloporus jarrovi*

Hidalgo del Parral, 5500', Chihuahua, Mexico

2252 *Bufo punctatus*

14 mi. by road W Ojito, Durango, in Chihuahua, Mexico

June 28

2253 *Sceloporus poinsetti*

16 mi by road NE El Vergel (Jaguinita), Chihuahua

2254 *Sceloporus poinsetti*
2255 " "

R. Zweifel 1953

Catalogue

7 mi. SW El Vergel (Tagunita), 7800', Chihuahua, Mexico

June 28, 1953

2256 *Hyla eximia*
2257 *Rana pipiens*
2258 " "
2259 " "
2260 *Bufo*
2261 "
2262 "

June 29

2263 *Hyla arenicolor*
2264 *Scelaporus jarrovi*
2265 " "
2266 " "
2267 " "
2268 " "
2269 " "
2270 " "
2271 " "
2272 *Scelaporus poinsetti*
2273 *Thamnophis errans*
2274 " "
2275 *Crotalus pricei*

June 30

2276 ♂ *Cyanocitta stelleri* 99.6 gm testes 7 mm
2277 ♀ *Contopus pertinax pallidiventris* 26 gm ova 1 mm
2278 ♀ *Eutamias bulleri* 109 gm 226-95-36-21
2279 ♀ *Sciurus aberti* 440-195-67-42

R. Zweifel 1953

Catalogue

7 mi. SW El Vergel (Tagumita) 7800', Chihuahua, Mexico

June 30

2280 *Hyla eximia*
2281 " "
2282 ♂ *Bufo* (skeletonized)
2283 ♀ *Rana pipiens* (skeletonized)
2284 " "
2285 *Eumeces brevirostris*
2286 *Sceloporus jarrovi* (skeletonized)
2287 *Thamnophis rufipunctatus*
2288 *Thamnophis cyrtopsis*
2289 *Rana pipiens* (larvae)
2290 *Eleutherodactylus*
2291 *Rana pipiens*
2292 " "
2293 " "
2294 " "

July 1

2295 ♀ *Thomomys umbrinus* 93.1 gm, no embryos, 190-53-26-5
2296 *Ambystoma tosaceum* (larva)
2297 " " (")
2298 " " (")
2299 " " (")
2300 " " (")
2301 " " (")
2302 *Thamnophis rufipunctatus*
2303 *Thamnophis eques*

R. Zweifel 1953

Catalogue

7 mi. SW El Vergel (Tagunita) 7800', Chihuahua, Mexico

July 1

2304	Sceloporus	grammicus	
2305	"	"	
2306	"	"	
2307	"	"	
2308	"	"	
2309	"	"	
2310	"	"	
2311	"	"	
2312	"	"	
2313	"	"	
2314	"	"	
2315	"	"	
2315A	"	"	
2316	Sceloporus	jarrovi	
2317	Ambystoma	rosaceum (larva)	

July 2

2318 ♂	Sida	mexicana	27.3 gms, testes 13 mm
2319 ♂	Pituophis	taeniatus	10.3 gms, testes 3 mm
2320	Thamnophis	errans	
2321	Thamnophis	equus	megalops
2322	"	"	"
2323	"	"	"
2324	"	"	"
2325	"	"	"
2326	"	"	"
2327	"	"	"
2328	~~Thamnophis~~	~~sufficinctus~~	"

} part of brood of 2321

R. Zweifel 1953

Catalogue

7 mi. SW El Vergel (Yaguanita) 7800', Chihuahua, Mexico

July 2

2329 *Thamnophis rufipunctatus*
2330 *Salvadorus poinsetti*
2331 " "
2332 " "
2333 *Hyla eximia*
2334 *Eleutherodactylus*
2335 "

July 3

3 mi. NE Rio Verde (town), 7600', Chihuahua, Mexico

2336 *Ambystoma rosaceum* (larva)
2337 " " (")
2338 " " (")
2339 *Thamnophis rufipunctatus*
2340 *Thamnophis errans*

7 mi. SW El Vergel (Yaguanita) 7800', Chihuahua, Mexico

2341 ~~29~~ *Crotalus molossus*
2342 *Crotalus pricei*
2343 *Thamnophis rufipunctatus* (skeletonized)
2344 " "
2345 " "
2346 " "
2347 " "

R. Zweifel 1953

Catalogue

~~3 mi. NE Rio Verde (town)~~ ?

7 mi. SW El Vergel (Jaguinita) 7800', Chihuahua, Mexico

July 3

2348 Thamnophis sufipunctatus

2349 " "

2350 Thamnophis eques megalops (skeletonized)

2351 Thamnophis errans (skeletonized)

2352 Eleutherodactylus

July 4

2353 ♀ Dendroica auduboni 11.5 gm, ova <1 mm

2354 ♂ Turdus migratorius 72.2 gm testes 13 mm

2355 ♂ Citellus lateralis madrensis 217-50-39-23

2356 Thamnophis errans

6 mi. S, 16 mi. W San Francisco del Oro, Chihuahua, Mexico

July 5

2357 Sceloporus jarrovi

July 6

Rio Florido at Camitillo, 6100', Durango, Mexico

2358 Thamnophis eques megalops

2359 Thamnophis melanogaster

Rio Nazas at San Salvador, Durango, Mexico

2360 Sceloporus undulatus

2361 " "

R. Zweifel 1953

Catalogue

Rio Nazas at San Salvador, Durango, Mexico

July 6

2362 Holbrookia texana

2363 " "

2364 Pituophis catenifer

4 mi W San Juan del Rio, 5800', Durango, Mexico

2365 Bufo cognatus

2366 " "

San Jose de Gracia, 6300', Durango, Mexico

2367 Thamnophis

2368 "

22 mi. N Durango, 6300', Durango, Mexico

2369 Bufo cognatus

20 mi. N Durango, Durango, Mexico

2370 Bufo cognatus

16 mi. N Durango, Durango, Mexico

2371 Bufo punctatus

2372 " "

1.4 mi N Morcillo, 6300', Durango, Mexico

2373 Tamnophis getulus

R. Zweifel 1953

Catalogue

33 mi ENE El Salto, 7200', Durango, Mexico

July 7

2374 Sceloporus jarrovi

6 mi. ~~ESE~~ WSW Las Adjuntas, 8500', Durango, Mexico

July 7

2375 Ambystoma rosaceum

2376 " "

2377 Eleutherodactylus

July 8

2378 Ambystoma rosaceum

2379 " "

2380 " "

2381 Bufo

2382 Hyla eximia

2383 " "

2384 " "

2385 " "

2386 " "

2387 " "

2388 " "

2389 Sceloporus grammicus

2390 Eumeces brevirostris

July 9

2391 Sceloporus grammicus

2392 " "

2393 " "

R. Zweifel 1953

Catalogue

6 mi. WSW Las Adjuntas, 8500', Durango, Mexico

July 9

2394 Eumeces brevirostris
2395 " "
2396 " "
2397 " "
2398 " "
2399 " "
2400 " "
2401 " "
2402 " "
2403 " "
2404 " "
2405 Crotalus pricei
24067 Sitta carolinensis
24078 Eutamias bulleri
2408 Phrynosoma orbiculare orbiculare

July 10

24098 Peromyscus 143-64-21-18, 25.3 gm
2410 Sceloporus grammicus
2411 " "
2412 Sceloporus jarrovi
2413 Sceloporus poinsetti
2414 Crotalus pricei
2415 Ambystoma rosaceum (larva)
2416 " " "
2417 " " "
2418 " " "

R. Zweifel 1953

Catalogue

6 mi. WSW Las Adjuntas, 8500', Durango, Mexico

July 10

2419	Ambystoma rosaceum	(larva)	
2420	"	"	"
2421	"	"	"
2422	"	"	"
2423	"	"	"
2424	"	"	"
2425	"	"	"
2426	"	"	"
2427	"	"	"
2428	"	"	"
2429	"	"	"
2430	"	"	"
2431	"	"	"
2432	"	"	"
2433	"	"	"
2434	"	"	"
2435	"	"	"
2436	"	"	"
2437	"	"	"
2438	"	"	"
2439	"	"	"
2440	"	"	"
2441	"	"	"
2442	"	"	"
2443	"	"	"

R. Zweifel 1953

Catalogue

6 mi WSW Las Adjuntas, 8500', Durango, Mexico

July 10

2444 ♀ *Ptilogonys cinerens* ova 2mm 33.9 gm

July 11

2445 *Sceloporus poinsetti*

2 mi. NE La Ciudad, 8000', Durango, Mexico

2446 *Sceloporus poinsetti*

2447 " "

2448 *Rana pipiens*

2449. *Hyla eximia*

2450. " "

2451 " "

2452 " "

2453 " "

2454 " "

2455 " "

2456 " "

2457 " "

2458 " "

2459 " "

2460 " "

2461 " "

2462 " "

2463 " "

2464 " "

R. Zweifel 1953

Catalogue

2 mi. NE La Ciudad, 8000', Durango, Mexico

July 11

2465 *Hyla eximia*
2466 " "
2467 " "
2468 " "
2469 " "
2470 " "
2471 *Ambystoma rosaceum*

16 mi by road SW La Ciudad, Durango, in Sinaloa, 7800', Mexico

2472 *Sceloporus jarrovi*
2473 *Crotalus lepidus*

10 mi by road NE El Batel, 6400', Sinaloa, Mexico

July 12

2474 *Sceloporus*

14 mi by road SW El Batel, 4200', Sinaloa, Mexico

2475 *Rana*
2476 "
2477 "
2478 "
2479 "
2480 "
2481 "

R. Zweifel 1953

Catalogue

9 mi N Mazatlan, 5000', Sinaloa, Mexico

July 12

2482 Smilisca baudini

2483 " " (skeletonized)

2484 Bufo mazatlanensis (skeletonized)

2485 Scaphiopus couchi

2486 " "

2487 " "

2488 " "

2489 " "

2490 " "

July 13

2491 Cnemidophorus sacki

2492 " "

2493 " "

2494 " "

2495 " "

2496 Sceloporus clarki

2497 Anolis

2498 ~~Bufo Xenoctenon~~ (escaped)

2499 Bufo mazatlanensis

2500 Smilisca baudini

2501 Ptenohyla fodiens

2502 " "

2503 " "

2504 " "

2505 " " (skeletonized)

R. Zweifel 1753

Catalogue

9 mi. N Mazatlan, ~~500'~~ 100', Sinaloa, Mexico

July 13

2506 Diaglena spatulata

2507 Hypopachus

~~2508 Pternohyla fodiens~~

5 mi. N Mazatlan, ~~500'~~ 100', Sinaloa, Mexico

2508 Oxybelis aeneus

2509 Bufo mazatlanensis

2510 " "

2511 Bufo horribilis

2512 ~~Bufo~~ Pternohyla fodiens

2513 " "

2514 " "

2515 " "

9 mi. N Mazatlan, ~~500'~~ 100', Sinaloa, Mexico

July 14

2516♂ Cassiculus melanicterus testes 14 mm. 99.1 gm

2517 Diaglena spatulata

2518 " "

2519 Agalychnis dacnicolor

2520 " "

2521 " "

2522 " "

2523 Smilisca baudini

R. Zweifel 1953

Catalogue

9 mi. N Mazatlan, 100', Sinaloa, Mexico

July 14

2524 *Smilisca baudini*
2525 " "

July 15

2526 ♂ *Vireo flavoviridis* red iris 18.6 gms, testes 8 mm
2527 *Seleoporus*
2528 *Cremidophorus sacki*
2529 " "
2530 " "
2531 " "
2532 *Salvadora hexalepis*

13 mi. N Mazatlan, Sinaloa, Mexico

July 15

2533 *Bufo horribilis* (skeletonized)

20 mi. N Mazatlan, Sinaloa, Mexico

2534 *Rhinocheilus lecontei*
2535 " "

23 mi. N Mazatlan, Sinaloa, Mexico

2536 *Agalychnis dacnicolor* (skeletonized)
2537 " "

4 mi. N Mazatlan, Sinaloa, Mexico

2538 *Callisaurus draconoides bogerti*
2539 " " "

R. Zweifel 1953

Catalogue

9 mi. N Mazatlan, 100', Sinaloa, Mexico

July 16

2540 Cnemidophorus sacki

2541 " "

11 mi N Mazatlan, Sinaloa, Mexico

2542 Bufo mazatlanensis

13 mi. N Mazatlan, Sinaloa, Mexico

2543 Pituophis catenifer

18 mi. N Mazatlan, Sinaloa, Mexico

2544 Rhinocheilus lecontei antoni

23 mi. N Mazatlan, Sinaloa, Mexico

2545 Trimorphodon paucimaculata

4 mi N Mazatlan, Sinaloa, Mexico

July 18

2546 Callisaurus draconoides bogerti

2547 " " "

2548 " " "

12 mi N Mazatlan, Sinaloa, Mexico

2549 Holbrookia maculata

2550 " "

2551 Sceloporus clarki

H. Zweifel 1953

Catalogue

25 mi. NW Elota, Sinaloa, Mexico

July 18, 1953

2552 *Cnemidophorus sacki*
2553 " "
2554 " "
2555 " "
2556 " "
2557 " "
2558 " "
2559 " "

7 mi. W Guamúchil, Sinaloa, Mexico

2560 *Bufo alvarius*
2561 *Bufo mazatlanensis*
2562 " "
2563 " "
2564 *Urosaurus ornatus*

July 19

2565 *Cnemidophorus sacki*
2566 " "

4.4 mi. N Ciudad Obregon, Sonora, Mexico

2567 *Cnemidophorus tigris*
2568 " "
2569 " "

R. Zweifel 1953

Catalogue

4.4 mi N Ciudad Obregon, Sonora, Mexico

July 19

2570 *Cremidophorus tigris*

2571 " "

2572 " "

2573 *Dipsosaurus dorsalis*

2574 *Sceloporus magister*

6.3 mi E Bacum, Sonora, Mexico

2575 *Bufo mazatlanensis*

1½ mi. E Bacum, Sonora, Mexico

2576 *Bufo alvarius*

10 mi E Vicam, Sonora, Mexico

2577 *Bufo alvarius*

11 mi. NW Vicam, Sonora, Mexico

2578 *Bufo debilis*

2579 " "

2580 " "

2581 " "

4 mi N Guaymas, Sonora, Mexico

July 20

2582 *Holbrookia maculata*

2583 " "

R. Zweifel 1953

Catalogue

4 mi N Guaymas, Sonora, Mexico

July 20

2584 Cnemidophorus tigris
2585 " "

3 mi S El Oasis (45 mi N Hermosillo) Sonora, Mexico

2586 Urosaurus ornatus
2587 " "
2588 Callisaurus draconoides
2589 " "
2590 Dipsosaurus dorsalis
2591 Masticophis flagellum

11 mi N El Oasis (45 mi N Hermosillo), Sonora, Mexico

2592 Ptemohyla fodiens
2593 " "
~~2594~~

Sycamore Canyon, Pajarito Mtns, Santa Cruz Co., Arizona

July 21

2594 Rana tarahumarae (skeletonized)
2595 " " (")
2596 " " (")
2597 " " (larva)
2598 " " (larva)

R. Zweifel 1953

Catalogue

Sycamore Canyon, Pajarito Mtns, Santa Cruz Co., Arizona
July 21

2599 *Rana tarahumarae* (larva)
2600 " " (")
2601 *Rana pipiens* (series of 9 larvae)

Palm Canyon, Shithouse (Kofa) Mountains, 2000', Yuma Co., Ariz.
July 23

2602 *Uta stansburiana*

Trabuco Guard Station, Trabuco Canyon, 1500', Orange Co., Calif
Aug. 16

2603 *Triturus torosus*
2604 *Rana aurora draytoni*
2605 " " "

JOURNAL

R. Zweifel 1953

Journal

We left Woodland Hills, Calif, on Saturday morning, June 20 and after picking up Bill Riemer's brother-in-law, Jerry Klotz, in Riverside, continued on to Arizona. The party consists of Riemer, Klotz and myself, traveling in Riemer's 1950 Chevrolet carry-all.

About 6:00 PM we arrived in Wickenburg, Arizona and spent the evening with the Fred Shannon's. Next morning (June 21) we drove to Tucson, spending the evening at Bill Woodin's. After visiting the Arizona-Sonora Trailside Museum, of which Bill Woodin is Assistant Director, we drove on to New Mexico, camping a few miles north of El Paso on the night of the 22nd. At our campsite (mi. E Berino, Dona Ana Co., New Mexico, on the morning of June 23rd I shot three Cnemidophorus tigris. On the previous evening we had driven from Deming, New Mexico to Berino, a distance of about 100 miles, without seeing a single snake, alive or dead. The heavy traffic along this highway and bright moonlight were probably responsible for the absence of snakes.

Buying supplies in El Paso and getting out gun permits in C. Juarez took most of the day, so it was well after dark when we crossed the border. We drove to a point 3.8 mi. S

R. Zweifel 1953

Journal

June 23

Samalayuca, Chihuahua, where we camped in the sand dunes. No snakes were seen in the 37 miles of night driving to our campsite. Bright moonlight again.

June 24

Collected 6 *Cnemidophorus tigris* in the sand dunes at our campsite before driving south again. The ride from Juarez to Chihuahua is monotonous in the extreme. Sometimes *Larrea* desert, most mostly just overgrazed country which shows little to indicate what it might look like under native conditions.

Several *Phyrnosoma cornutum* were seen on the highway and one secured by the simple expedient of running over its head. This was 22 mi N Ahumada. The only snake seen was a DOR *Masticophis flagellum* (not saved) at 5 miles S Ahumada. A *Sceloporus undulatus* was found in a well at a roadside park 14 mi NNE Chihuahua.

After stopping in Chihuahua city to pick up mail, we drove west along the road to Cuauhtémoc (San Antonio on older maps). There is a new paved highway extending the 105 Km from Chihuahua to Cuauhtemoc. Beyond that point a fairly well graded dirt road takes over.

R. Zweifel 1953

Journal

June 24

We traveled as far west as Miñara, camping by the Rio Papigochic. With the exception of a range of hills just west of Pedemales, the area between Cuauhtémoc and Miñaca is a vast plain, broken only by an occasional basaltic or limestone hill. The region is under intense cultivation so that it is difficult to get an impression of what the native vegetational picture might have been. The hillsides support a scrubby growth of oak and piñon pine with little or no understory, due to overgrazing. Sufficient rain has not yet fallen to bring the oaks into leaf or start the annuals.

June 25

The Rio Papigochic at Miñara (6300') averages about 30' wide and 1' deep. There is an occasional cottonwood and willow along the river, but the amount of shade given the stream is negligable. Baccharis is abundant in the stream bottom.

We collected many garter snakes (T. eques megalops and T. infipunctatus), Bufo woodhousi and Rana pipiens in the river. The only lizards found were Cnemidophorus sacki (abundant in thickets of Baccharis in the washes) and a single Holbrookia maculata.

June 26

We left the Miñara camp in the morning and drove south over good dirt roads to and a few miles past Pachera. The same "alti-plano" aspect is present throughout the whole region, so it was decided to

Rio Papigochic near Miñaca, Chihuahua, June 25, 1953

Habitat of Bufo woodhousi, Rana pipiens, Thamnophis eques megalops, Thamnophis rufipunctatus and Kinosternon.

Elevation 6300'

R. Zweifel 1953

Journal

June 26

return to Chihuahua City and drive south. We camped at an abandoned adobe 1.6 mi. W Pedernales in the overgrazed piñon - oak association. June 27

Nesting robins were present here. Biel shot a brown towhee and poorwills were heard after dark. Scrub jays and kingbirds also were present. Reptiles collected included *Pituophis catenifer*, *Sceloporus jarrovi* and *Sceloporus poinsetti*.

The commonest bird throughout this "alti-plano" region is the horned lark. Probably the intense cultivation with destruction of the oak scrub and overgrazing have combined to allow a considerable expansion of the area occupied by this bird.

Leaving the Pedernales camp, we drove to Hidalgo del Parral. On Parral we met an American (Bruce ~~Bulman~~ Bryan, Apt 85, Parral) working for the American Smelting and Refining Co. lead and silver mine in Parral. His offer of liquid refreshment was accepted with impolite haste, and resulted in our spending the night at his home and even included the use of a swimming pool. The capture of a *Bufo punctatus* at the swimming pool justified this excursion.

R. Zweifel 1953

Journal

June 28

Following directions provided by Stan Weitzman and Jack Tatin, who were down here last year, we were able to able to find the road to take us back into the mountains in the general direction of Guadalupe y Calvo. The road follows a railroad bed to Ojito (in Durango) and then a better logging road to El Vergel (Tagunita on the aeronautical chart).

The "alti-plano" aspect is again evident here, but in terms of actual area, is less well developed than farther north. The upper reaches of several (2 main) deep barrancas are crossed, and near El Vergel the road climbs to over 8000', leaving the scrubby oak and piñon country and ascending into the yellow pine - madrone association and the mountains.

There was evidence of a slight rain today, but the heavy summer rains have not yet started. The "lakes" at El Vergel are dry. When Tatin and Weitzman were here last summer, the road ended at El Vergel. However, there is now a road under construction to Guadalupe y calvo. We have camped by a stream on that road 12 kilometers from El Vergel. From our campsite (elev. 7800') the only trees which can be seen are yellow pines. The region has been logged, hence the aspect is relatively open. There is practically no understory,

R. Zweifel 1953

Journal

June 28

probably due to the cattle & dry season aspect.

Collecting along the stream shortly before dark I found Rana pipiens, Hyla eximia and Bufo microscaphus. Bill got a Thamnophis eremus.

June 29

Last nights minimum temperature (recorded on the Taylor max.-min. thermometer) was 47°F. The maximum today was 80°F. All temperatures will be taken in the shade at about 4' off the ground.

The stream by our campsite averages about 6' wide and 8" deep. There are pools up to 2' and more in depth. Rana pipiens is abundant in the stream. Large tadpoles and egg masses of this species were also found. Tadpoles of Bufo and apparently also Scaphiopus are present in the stream, although adults of the latter have not yet been found. Bill got Ambystoma rosaceum larvae.

Our plans for an evening frog hunt were cancelled by the appearance of a dozen or so Mexican loggers and Tarahumara Indians who had seen my guitar in the afternoon and decided to hold a small fiesta. We traded songs for several hours.

7 mi. SW El Vergel (Lagunita) 7800', Chihuahua, Mexico
June 30, 1953

Camp Dust-bowl in the Pines. Boulders behind the camp inhabited by *Sceloporus jarrovi* and *Eleutherodactylus*.

R. Zweifel 1953

Journal

7 mi. SW El Vergel (Jaguinta) 7800', Chihuahua, Mexico

June 30

Minimum temperature 44°, maximum 76° F. Showers in the afternoon and early evening.

Hunting this morning yielded 4 Steller's jays, 1 flycatcher (sp.?), 1 chipmunk, 1 gray squirrel and a ground squirrel (*lateralis* type), shot by Bremer and myself. Biel later got a red-backed junco.

The high point of todays collecting was a green *Eleutherodactylus* found in the rocks behind our camp.

July 1

Minimum temperature 45°F, maximum 80° F. Very light showers in afternoon.

According to the Mexicans, the stream along which we are camped is the Arroyo Cuevo Blanco. The "white cave" is not a true cave, but an area of overhang on a cliff, inhabited by Tarahumara indians.

R. Zweifel 1953

Journal

7 mi. SW El Vergel (Yaguinita) 7800', Chihuahua, Mexico

July 2

Minimum temperature 48° F, maximum 77° F. The first heavy shower since we've been here in afternoon.

Spent most of the morning putting up a bluebird and an olive warbler which I shot. The rain stimulated the Eleutherodactylus to begin calling after nightfall. Bill and I went out and caught three (see sp. account).

Included among the garter snakes caught by Jerry Klotz and those brought in by the Mexicans were our first specimens of Thamnophis eques megalops. We now have four species of Thamnophis from this locality, the others being T. errans, T. cyrtopsis and T. sufipunctatus.

The presence of the four species at the same local presents an interesting ecological problem. T. errans appears to be decidedly terrestrial – we have found it several times in the forest far from water. T. sufipunctatus at the other extreme has not been found by us more than a few inches from water. The other two species are presumably ~~entirely~~ largely aquatic, though the only T. cyrtopsis which I collected was 200' from the stream.

R. Zweifel 1953

Journal

7 mi. SW El Vergel (Tagunita) 7800', Chihuahua, Mexico

July 3

Today we drove to the present end of the road on which we are camped, and which will eventually go to Guadalupe y Calvo. At present the road ends at the Tunas Ranch. From this point we hiked down a canyon for about 1½ miles. This locality is recorded as 3 mi NE Rio Verde, a locality subject to alteration if and when good maps become available. It is seven miles by road past our present campsite.

The canyon is relatively narrow with steep rocky walls, the canyon bottom being 50-100' wide until it opens up about 1½ miles below the Tunas Ranch. For most of the way, the stream flows on or ~~close~~ close to bedrock and is shallow. There are a few pools up to 2' in depth. The canyon bottom shows much evidence of severe scouring action during high water.

Yellow pines are the dominant trees here. There are groves of aspen at some spots along the canyon walls, and willows where the canyon opens up. The elevation is about 7600'.

Rana pipiens was common in the creek, but not so abundant as in Arroyo Cuevo Blanco. Hybid tadpoles were taken but no adults. A single small Bufo was found, this in marked contrast to their extreme abundance at Arroyo Cuevo Blanco.

R. Zweifel 1953

Journal

7 mi. SW El Vergel (Tagunita) 7800', Chihuahua, Mexico

July 3

Bill got a small skink and three garter snakes were taken, two *T. sufijunctatus* and a *T. errans*. *Ambystoma* larvae were present in the stream, & caught three of four seen. Bill shot a water ouzel. Red faced warblers were seen, and red backed juncos were common. A few trout were seen in the stream. (Raccoon tracks)

Between Arroyo Cuevo Blanco and Junas Ranch, the forest loses some of the monotonous yellow pine aspect present at our camp, through the addition of oak, madrone and juniper

Collecting in a level, open stand of yellow pine I found a *Crotalus pricei* coiled beneath a 9" diameter log on dry soil. *Sceloporus grammicus* was common here.

While we were looking for *Eleutherodactylus* in the rocks near our campsite, I caught a *Crotalus molossus*. This was after dark, and not too long after the afternoon and early evening showers had let up. An *Eleutherodactylus* was also taken.

Todays minimum temperature was 51°F, the maximum 83°F.

R. Zweifel 1953

Journal

7 mi. SW El Vergel (Tagunita) 7800', Chihuahua July 4

Collected and prepared a warbler, robin and ground squirrel in the morning. Rain in the afternoon and early evening inhibited any further collecting activity. Another *Thamnophis eques* was purchased from a Mexican.

Birds present at this campsite include robin, western bluebird, Audubon warbler, olive warbler, red-faced warbler, flicker, acorn woodpecker, turkey vulture, Cassin's kingbird, Steller's jay, red-backed junco, killdeer, chickadee (sp.?), screech owl (sp.?, by voice), horned owl (by voice).

Trap lines for small mammals have yielded only *Peromyscus*. One gopher was taken on the flat by the stream. Workings are present throughout the forest. Specimens of gray squirrel, ground squirrel (*C. lateralis* type) and chipmunks have been taken.
(min. temp. 49°, max. 78°F)

July 5

Camp was broken this morning and we drove back to Parral, reaching there about 8:30 in the evening.

Mileage record

0.0 mi. Arroyo Cuevo Blanco (campsite)

7.0 El Vergel

29.8 Rio San Juan, 5100'. In oak belt, heavily grazed. *Rana pipiens* in stream. In 35°C water in pool in side canyon.

39.4 At this point a shallow, dry arroyo crosses

Journal

July 5

the road, and then within the space of a few hundred yards becomes a barranca with a depth of 100' or more. The nearly vertical rock walls are brilliantly stained with red and green lichen. The elevation is 5800'. Walnuts, two or three kinds of oaks and chihuahua pine are present in the barranca bottom. The surrounding countryside is of gentle, rolling relief with scrubby oak present where not cultivated.

There is a large (20' diameter) pothole in the barranca which probably has water in it permanently. No permanent stream was detected in the course of a walk of ½ mile down canyon. A frog seen in the pothole was probably Rana pipiens, though positive identification was not made. Bill found a Hyla arenicolor a short distance up canyon from the pothole. Sceloporus jarrovi was abundant in the canyon bottom and on the rocky walls.

49.4 mi. - road joins railroad bed

51.2 mi. - Ojito, Durango. Formerly a station on the railroad, now a couple of dust-encrusted adobes.

62.0 mi. Sceloporus jarrovi seen here.

69.3 mi. La Boquilla

75.2 mi San Francisco del Oro. Note. In order to

R. Zweifel 1953

Journal

July 5

get onto the road to Ojito and El Vergel from the end of the pavement at San Francisco del Oro, it is necessary to keep to the right, putting the largest pile of gray sand to your left, passing by the golf course (with paved blacktop greens) and out through the middle of the trash dump.

90.0 mi. ~~Durango~~ Parral. We spent the night the night with the Bryans who had foolishly asked us back.

July 6

We left Parral at about 10:00 AM, driving south for Durango. At the Rio Florido we stopped for lunch and spent some time collecting. Both Thamnophis eques megalops and Thamnophis melanogaster were found here. The river is 10-15' wide and one foot deep. There are walnuts and cottonwoods shading parts of the stream. Elevation 6100'. The surrounding countryside shows rolling, nearly barren hills supporting a few scrubby oaks.

Our next stop was at the Rio Nazas. Strikingly colored Cnemidophorus sacki were common along the river. Sceloporus undulatus was taken from tree trunks and Holbrookia texana from sandy areas near the river. This is in mesquite - ocotillo desert. A large gopher snake was purchased from two Mexicans

Journal

July 6

here, who also had a couple of senoritas for rent.

We drove on after dark in order to collect on the road. There were intermittant showers up until about 10:30 PM.

Several Bufo cognatus and B. punctatus were taken. Three Thamnophis (eques & marcianus), one Hypsiglena ochrorhynchus, and a single Tampropeltis getulus splendida were found alive on the road. The latter species had not previously been recorded for Durango.

Camp was made ten miles north of Durango city

July 7

Arrived in Durango in the morning, spent some time shopping. Durango actually has a serve-yourself supermarket, gringo style. Looks right out of the States, even to the signs, in english, warning about carrying children in the food basket.

An excellent paved road runs from Durango to El Salto, a distance of 64 miles. Past El Salto the roadbed is largely gravel, but is heavily traveled and well kept up.

Logging activities in this vicinity seem not to have devastated the forest, but merely opened it up. Reproduction is heavy in the pine stands. In some places the young growth is thick enough that it probably should be thinned for best timber production.

R. Zweifel 1953

Journal

July 7

We drove past El Salto on the gravel road and camped in the late afternoon 20 road miles past El Salto, the locality being recorded on the labels as 6 mi WSW Las Adjuntas, 8500', Durango, Mexico. Our campsite bears a large, dignified road sign reading "La Zosanga", evidently the name of a defunct community here.

July 8

The forest here is composed primarily of pines of at least two kinds, madrone, oak, and a few juniper. The meadows (formed by logging) have a thick growth of new grass, and rockier logged hillsides support large amounts of a bright red flowered Pentstemon which attracts great numbers of blue-throated and white-eared (?) hummingbirds.

In contrast to the level ~~and~~ or slightly rolling plateau country which persists to the region of El Salto, we are now in an area of considerable topographic diversity. In the region of our camp the road follows a ridge for a short distance. To the south on can overlook several ridges and the head of deep canyons.

Last night there were a few Eleutherodactylus calling from a rocky hillside near our camp — one was collected. Tonight none of these was heard, but instead Hyla eximia were in chorus.

Min. temp 53°F, max. 66°F. Heavy rain in afternoon.

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Journal

6 mi. WSW Las Adjuntas, 8500', Durango, Mexico

July 9

This morning was sunny and warm, the clouds not arriving until early afternoon. I collected a rattlesnake (C. pricei), 11 Eumeces brevirostris and a Phrynosoma orbiculare. Evidently the warm weather does a lot to stimulate reptile activity. Yesterday only two skinks were collected.

In the afternoon I shot a white-breasted nuthatch and a chipmunk. The chipmunk was 35' up on the trunk of an oak tree. Min. temp 49° F, max 73°. Rain in afternoon

July 10

Last night Bill and I set out two short traplines, 12 and 10 museum specials respectively, and caught only Peromyscus. His line was on a rocky logged hillside, mine on a similar but unlogged and rather lush slope leading down to a stream. A single gopher trap was unsprung.

Shot a flycatcher (2444) which was calling from the top of a pine tree in the afternoon.

Robins are as common here as at the El Vergel Camps. I flushed one off a nest containing three eggs. This was about 7' up in a small pine tree.

Minimum temp. 52° F, max. 68° F. Rain in afternoon and continuous showers on into the evening, the first time it has rained at night since we've been in the mountains.

R. Zweifel 1953

Journal

6 mi WSW Las Adjuntas, 8500', Durango, Mexico

July 10

The reptile hunting at this camp has been rather poor. Only a single garter snake (T. ornata) has been taken, and two rattlers (C. pricei). We have found few Sceloporus. S. jarrovi, S. poinsetti and S. grammicus are all present, but ~~as~~ with the exception of S. grammicus have been most difficult to find. Only a single S. jarrovi has been caught, and two or three S. poinsetti. The latter were associated with logs or stumps, a departure from the usual rocky habitat.

The weather has been such as to inhibit reptile activity. Usually the clouds form in mid to late morning and cut off the sunlight before the area is sufficiently warm to stimulate much activity. An exception was the ~~morning~~ day (yesterday) when the clouds held off until early afternoon, and the collecting picked up greatly (one rattler, 11 skinks, 1 Phrynosoma). The series of skinks was particularly valuable in that it enabled us to identify the ~~juvel~~ juveniles collected at the El Vergel camp, verifying them as a new state record, and a range extension of close to 200 miles.

Birds identified at this site were red backed junco, "black-capped" chickadee, pygmy nuthatch, white breasted nuthatch, spotted towhee, acorn woodpecker, red-shafted flicker, Steller's jay, vireo sp.?, flycatcher sp.?, blue-throated hummingbird, white-eared hummingbird (?), and robin.

6 mi. WSW Las Adjuntas, 8500', Durango, July 11, 1953

Eleutherodactylus found on the rocky hillside.

R. Zweifel 1953

Journal

En route Los Colgantes camp to Mazatlan

July 11

Broke camp about noon and drove on toward Mazatlan. The main road runs through La Ciudad, evidently a change from last year when Tatin and Weitzman had to make a side trip to get to La Ciudad.

1.8 mi before reaching La Ciudad, we came to a vast meadow in the pine forest (8000'). Hyla eximia were abundant here, some calling from their positions in the grass, others hidden under pieces of wood lying in the meadow.

Four transformed Ambystoma ~~mac~~ rosaceum were taken here, one under a fallen fence post in the meadow, the others under pieces of wood in the adjacent open forest.

Two of these are probably adult; the larger is largely black, possessing spotting only on the sides. Adult salamanders of this species have not been collected before.

Scelaporus poinsetti was present on rocky outcrops here, even on some several hundred feet out in the meadow.

About three miles past La Ciudad a small Crotalus pricei was picked up on the road.

Some ten miles past La Ciudad the road turns down a ridge and permits the first good view of the barranca region. It follows along ridge sides for many miles, losing altitude very slowly. The scenery along this route is nothing short of spectacular. From the road you look down thousands of feet into the rugged barrancas while hundreds of feet of vertical, multicolored cliffs lie directly above the road, and

R. Zweifel 1953

Journal

En route Las Adjuntas camp to Mazatlán

July 11

frequently deposit parts of themselves on it. For much of the way, heavy rain fell and clouds enveloped the road, making it necessary to drive with the lights on.

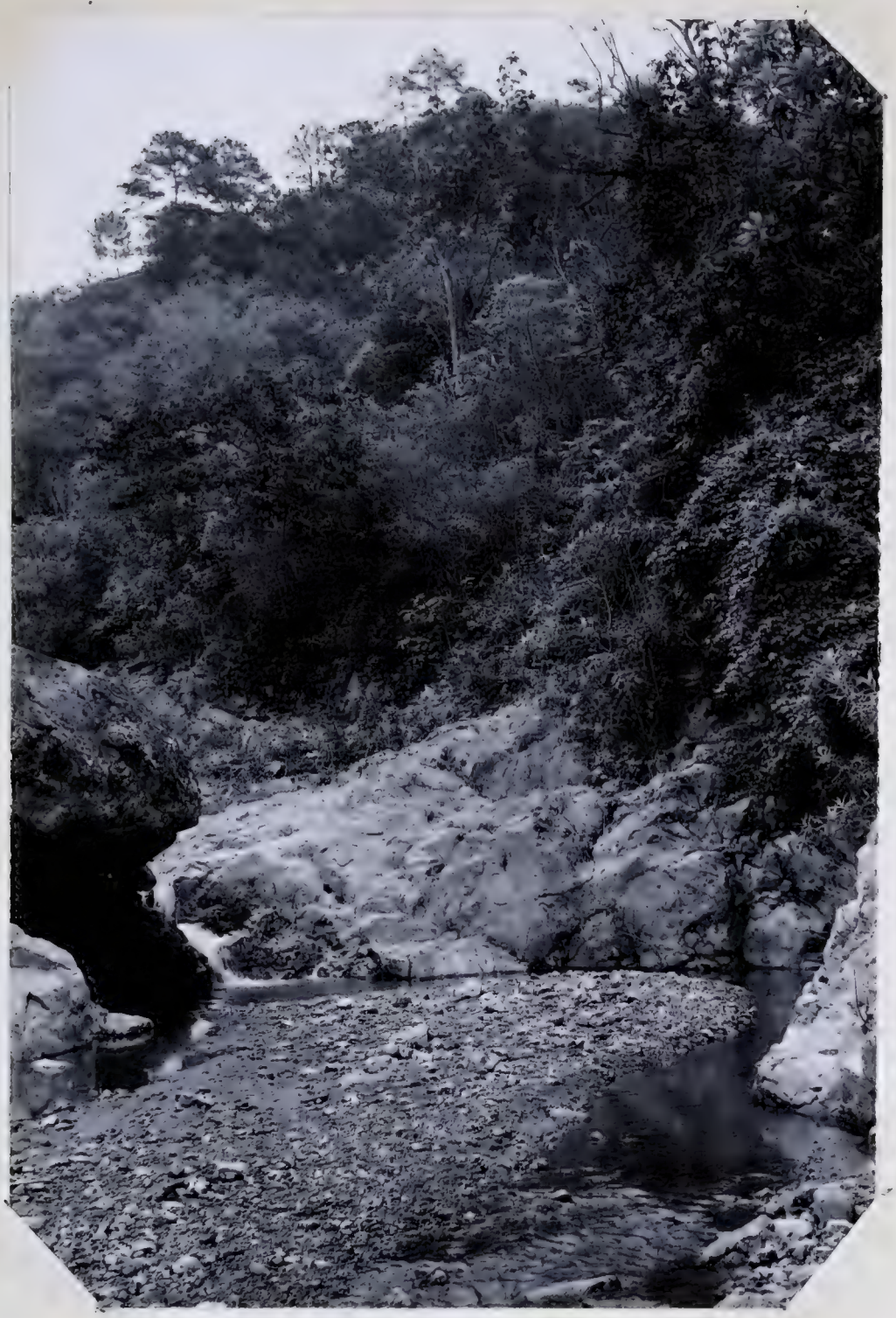
16 miles by road past La Ciudad (in Sinaloa?) I found a small Crotalus lepidus under a rock by the roadside. This is at the foot of a cliff in pine-oak forest, elevation 7600'.

Camp was made at an elevation of 6700' just past the "town" of Revoluaderos. Logging here has opened up the pine-oak forest so that the individual trees stand about 40' apart. Bromeliads are abundant, and there is a lush undergrowth of grass, ferns, and many other plants. Agaves are abundant on rocky outcrops. At least two kinds of pine are present here, one being the peculiar "weeping pine".

July 12

Continued on to Mazatlán. A stop 33.6 road miles past La Ciudad, 6400', yielded Rana sp.?, Sceloporus (jarrovi?) and an Anolis. Logged pine-oak-madrone. A DOR Crotalus lepidus was found just a mile down the road, and another three miles down. Neither was in condition to be saved.

At 50 road miles past La Ciudad we stopped at a stream and collected several Rana. A Sceloporus, possibly S. bulleri, was also seen here. The Rana may represent a new species related to R. sierramadrensis



14 mi. (by road) SW El Batel, 4200', Sinaloa, July 12, 1953

Habitat of *Rana*

H. Zwafel 1953

Journal

En route Los Adjuntas camp to Mazatlan'

July 12

of Guerrero.

Just past this place we were struck by the heaviest downpour I have ever experienced, and on one of the poorest stretches of road.

Mazatlan' was reached in the early evening, and we camped about sunset in the thorn forest north of town.

All in all, the road over the mountain to Mazatlan' is not nearly so bad as painted in the AAA booklet ("Do not attempt this road"), and the really spectacular scenery more than makes up for the inconvenience of slow travel. The roadbed is excellent - it has to be to withstand the immense amount of water it receives. The chief dangers to the motorist lie in the continual rain of dirt and rocks from the cliff above, and the danger of meeting one of the numerous busses on a blind curve in the fog (the Durango - Mazatlan' route has better bus service than Berkeley).

R. Zweifel 1953

Journal

En route to Adjuntas camp - Mazatlan, July 11, 12

Mileage record

-8.0	~~Ta~~ Camp July 7 - 11 8500'
-1.8	Ta Ciudad meadow, 8000',
0.0	Ta Ciudad, 8100'
3.2 ~~3.6~~	Buena vista, Caseta Forestal, 2810 M
27.2	Revoleaderas, camp night of 11th-12th
35.3	Stream, 6400', Rana, Anolis, Scelopoms
45.3	El Batel, 5800'
52.3	Stream, 4200', Rana, Scelopoms bullei?,
80.6	Town
95.0	Town, rock pavement.
108.0	Mazatlán

R. Zweifel 1953

Journal

9 mi. N Mazatlan, ~~500'~~ 100', Sinaloa, Mexico

July 12

Dense thorn forest. Relatively level ground, but a few small hills nearby.

After dark when a very light rain was falling Biel and I walked along the highway for a couple of hours. Collected were 12 Scaphiopus couchi, 3 Smilisca baudini, 1 Pternohyla fodiens and 1 Bufo mazatlanensis.

Shortly after our return at about 11:00 PM, a very heavy rain began to fall and continued through much of the night. Our tent shed water like a screen door, making the night most uncomfortable.

This afternoon we rigged up a tarp to funnel rain water into a bucket. The rain is heavy enough to fill the bucket in short order.

July 13

With a slight let-up in the early daylight hours, the heavy rain continued until almost noon. When the sun came out I walked along a road through the thorn forest until attracted by a frog chorus. The chorus proved to be coming from a dammed up pond and the stream flowing into it. The surface of the pond, about 50' in diameter, was a mass of amplexing and calling Scaphiopus couchi. Bufo mazatlanensis males were calling from the edges of the pond. Their call is a trill which lacks the power and rattling quality

R. Zweifel 1953

Journal

9 mi. N Mazatlan, 100', Sinaloa, Mexico

July 13

of B. cognatus, being smoother, and is not a whistling trill like that of B. punctatus. The biggest surprise was the discovery of a Draigena spatulata sitting on ~~the~~ a snag protruding a few inches out over the pond, and giving his monotonous croak. Another was seen on the branches of a dead tree fallen into the water. At least two other species gave an occasional call, but these were not found.

All this was taking place in sunlight bright and warm enough that the Cnemidophorus were active. The pond and stream flowing into it were very turbid with reddish-brown silt. Kinosternon was taken in the pond.

We had intended to return to the pond in the evening, but the late return of the third member of our party from a hike to the beach cancelled that plan. Instead, we spent an hour driving on the highway. The only snake found was a DOR Hypsiglena torquata. Anurans were very abundant. We found many Pternohyla fodiens, and also Smilisca baudini, Bufo mazatlanensis, ~~and~~ Bufo horribilis, and Scaphiopus couchi. In addition, earlier in the evening I had found a Hypopachus on the dirt road by our camp.

Minimum temp 71°F, Maximum 93°F.

Also collected today were Cnemidophorus sacki, Sceloporus clarki, Anolis, and Oxybelis aeneus.

R. Zweifel 1953

Journal

9 mi N Mazatlan, 100', Sinaloa, Mexico

July 13 14

After this morning's rain I shot a large, ramous yellow and black bird. Bird hunting in the thorn forest is considerably more difficult than on other places where we have worked on this trip. The forest is so thick that when close enough to see the bird, you are too close to use the 16 gauge.

Tonight we returned to the pond described in yesterday's notes. The water had receded so that only about half the former surface area remained, and the stream feeding the pond was dry. There was rain this morning, but evidently not enough to maintain the water level.

There was no breeding activity in the pond. Several Dragona, Smilisca and Agalychnis were found in trees around the pond. A little Hypopachus(?) was found giving its buzzing call from a bed of dry leaves near the muddy stream bottom.

Jerry found a Leptophis diplotropis by the pond this afternoon.
Maximum temp. 91°, min. 73°F

July 15

Collecting this morning in the Thorn Forest gave a Sceloporus, a few Cnemidophorus and a Salvadora hexalepis. Also shot a vireo (2526) which was singing in a tree.

R. Zweifel 1953

Journal

9 mi. N Mazatlan', 100', Sinaloa, Mexico

July 15

We went into town for supplies and stopped by the beach for a swim. Found and caught a couple of Callisaurus draconoides bogerti on the sand just above the high tide mark. These are essentially topotypes, the dual type locality being Mazatlan' and one of the nearby islands.

Starting out shortly after sundown, we drove the main highway to a point 20 miles north of our camp and back again. We found a Trimorphodon paucimaculatus and three Rhinocheilus lecontei antonii, two of the latter fresh DOR. A DOR racer of some sort was not saved. Three Agalychnis dacnicolor were found out on the road and two Bufo horribilis. We did not stop for all amurans. The road surface was dry, there having been no rain since yesterday morning.

Although climatic conditions were good for collecting (no moon, no rain, good temperature), the road itself is unfavorable, in that it is usually built up well above the surrounding countryside so that a snake must cross a ditch and climb up 10'-20' of shoulder to get onto the road.

Todays minimum temperature 73°F, maximum 94°F. No rain at all today.

R. Zweifel

Journal

9 mi. N Mazatlan, 100', Sinaloa, Mexico

July 16

From a distance, the Thorn Forest appears so dense as to be impenetrable. However, closer examination shows that the lower layer is sufficiently open that it is possible to make a somewhat contorted path through even the thicker appearing parts.

The main layer of vegetation stands at 10-12' in height. Above this occasional trees project to 20' or more. There is no definite layer developed below the main layer, only some spotty herbaceous vegetation and agaves in the more open places. Small bromeliads are common on the trees. Numerous vines hang from the trees.

Annoying insects form the most abundant animal life. The mosquitos bance you day and night. Even on the hottest afternoon, to step into the shade is to invite a bloodthirsty swarm. Flying termites were seen in great swarms during the heaviest rainstorms, both day and night. A termite nest 20' up in the crotch of a tree was seen. It was about 3' x 2' x 2' in dimensions, and reached by the termites via inch wide tunnels constructed up the outside of the trunk.

The region swarms with geometrid larvae which seem to spend most of their time hanging from threads. From this position they land on your neck whereupon they get swatted with the vigor due a mosquito, and respond by squashing green all over you.

R. Zweifel 1953

Journal

9 mi. N Mazatlan, 100', Sinaloa, Mexico

July 16

Tonight we drove north on the highway a distance of 15 miles and back again. A Trimorphodon pancimaculata, two Pituophis catenifer, two Rhinocheilus l. antoni and a large Jumpropeltis doliata melanoi were picked up on the road. All except one Rhinocheilus and the king snake were DOR.

Gopher snakes have previously been reported from northern Sinaloa, so tonight's specimens constitute a range extension to the south.

Todays minimum temperature 75°F, maximum 95°F.

July 17

Broke camp today and moved to the beach. Went into Mazatlan for supplies. Bill justified our existence by shooting one Sceloporus today.

July 18

At our camp on the beach 4 mi. N Mazatlan this morning I shot half a dozen Callisaurus. The lizards are abundant in the vicinity of thorny shrub and cactus patches just above the high tide line.

The thorn forest here is lower (6-8") and much denser than that at our previous camp. Large amounts of cactus occupy what would in the other area have been relatively open ground beneath

R. Zweifel 1953

Journal

En route north from Mazatlan, Sinaloa

the canopy. July 18

We left Mazatlan at 8:30 AM, heading north along the main highway

0.0 mi. Mazatlan (Post Office)

11.7 mi. Stopped to look for bats in palm trees. Found none – fronds (skirts) too sparse. Shot two *Holbrookia maculata* and a *Sceloporus clarki*, the sceloporus on the trunk of a palm tree.

40.6 mi Rio Piaxtla

48.9 ~~52.8~~ mi. Rio Elota

74.0 mi Lunch stop. Collected *Cnemidophorus sacki*, *Holbrookia maculata* and *Sceloporus clarki*. The cnemid's are the colorful spotted form. Thorn forest.

136.6 Culiacan

166.1 End of pavement

166.5 Pericos

228.9 Guamúchil

238.0 Camp for the evening. I walked the dirt roads by our campsite in the evening and found three *Bufo mazatlanensis* and a *Bufo alvarius*. The latter has not been recorded from Sinaloa previously. Also taken here were *Urosaurus ornatus* and *Cnemidophorus sacki*, the spotted, brightly colored type.

R. Zweifel 1953

Journal

En route north from Mazatlan, Sinaloa

July 19

238.0 Leave camp 11:00 AM

266.3 RR track

269.2 cross road to Las Mochis

280.0 Rio Fuerte – leave flat coastal plain and enter hills for a few miles.

302.3 Oiled road

312.8 Continuous pavement reached. Of the intervening 147 miles, there are some short stretches of pavement and larger regions where normal highway speeds are possible over a good dirt surface. However, there are still many miles where the rocky surface necessitates speeds not over 15-20 mph.

370.4 Navojoa (Sonora)

413.6 Ciudad Obregon

418.2 Dinner stop. Cnemidophorus tigris, Dipsosaurus dorsalis, Sceloporus magister, Bufo cognatus. The toad involves a range extension of some 350 miles to the south. Desert vegetation, not thick enough to be termed thorn forest.

419.9 Rana pipiens and Pternohyla fodiens found in a roadside rain pool. The single Pternohyla was seen calling, but escaped.

R. Zweifel 1953

Journal

En route north from Mazatlan, Sinaloa

July 19

432.4 Bacum

446.8 Vicam

459.0 a roadside rain pool. Four *Pternohyla fodiens* and 8 *Bufo debilis* caught.

495.2 Guaymas

498.9 Camp by the Guaymas airport

July 20

Collecting in the morning yielded *Cnemidophorus tigris*, *Holbrookia maculata* and *Phyllodactylus*. A *Sauromalus* was seen but escaped. *Cnemidophorus collaris* was also present nearby.

Drove to Bocochibampo for a swim and into town for food. Continued on north

580.0 Hermosillo

638.5 Dinner stop. Arborescent desert – palo verde, mesquite. Possibly mesquite grassland? *Masticophis flagellum*, *Callisaurus*, *Uro-saurus*, *Dipsosaurus*, *Holbrookia maculata*, *Cnemidophorus tigris*.

642.0 El Oasis

653.5 *Pternohyla* taken, *Bufo debilis* heard. Elev. 2100'.

R. Zweifel 1953

Journal

En route north from Mazatlan, Sinaloa

July 20

678.2 Benjamin Hill (Sonora)
689.3 one *Pternohyla* taken.
704.8 Santa Ana (11:00 AM)
709.1 Camp

July 21

Leave camp 8:15 AM

716.4 Magdalena
731.6
~~727.5~~ Imuris
758.0 *Thamnophis cytopsis* DOR, 3500'
785.8 International Boundary, Nogales.

After a short delay at the border (someone feel there should be duty paid on our specimens), we drove on to the Ruby Road and Sycamore Canyon, Pajarito Mtns, Santa Cruz Co., Arizona.

Here we met Dr W. Frank Blair of the University of Texas, and a graduate student, who were frog collecting and recording anuran calls, the second activity being their main effort. They had on the previous evening succeeded in recording *Microhyla* at Peña Blanca. They had also collected a small *Rana tarahumarae* in Sycamore Canyon.

I hiked a considerable distance down

R. Zweifel 1953

Journal

Santa Cruz Co., Arizona

July 21

canyon and caught three adult *tarahumarae* and some larvae.

We returned to Peña Blanca to camp. Following Dr. Blair's directions, we found and caught a single *Microhyla* in the pool where he had taken several last night

July 22

Drove to Tucson.

July 23

Drove from Tucson to the Sheuthouse (Mofa) Mountains, Yuma Co., Arizona, to look for *Hyla arenicolor* rumored to be there. The most easterly *Washingtonia* palms occur here, so Palm Canyon seemed to be the logical place to look for water and frogs.

The palms are reached by a steep, rocky trail, a distance of about one mile from the end of the road. They are located in a ~~a~~ narrow, south-facing side canyon, little more than a cleft in the main canyon wall. The canyon containing the palms is about 20-25' wide at the bottom and has nearly vertical walls reaching up 50 to 100'. There seems to be no surface water in this canyon. The canyon is sufficiently deep and narrow that it probably receives very little direct sunlight, with consequent low rate

Journal

Yuma Co., Arizona July 23

of transpiration and thus explains the existence of the palms there.

There are several prominent water streaks on the cliff faces at the mouth of the main canyon, at the end of the road. Possibly water filled potholes or even springs may exist up on those cliffs. Jerry hiked up the main canyon after dark looking for water, but found ~~one a~~ only a tiny pothole 6" in diameter. He brought back a few tiny black tadpoles from it, too dessicated to be identified.

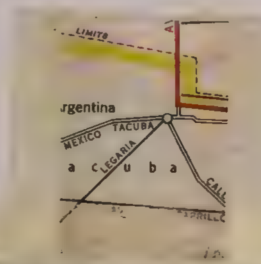
The Hyla remain to be found. The presence of bighorn sheep (we saw two) suggests that some surface water is present, but they may travel very far to it.

July 24

Returned to Los Angeles.

For what they are worth, here are max-min temperature averages and ranges for our three main campsites:

	Ave. Min	Ave. Max	Range
El Vergel	47.3°F	79.0°F	(44-83)
Las Adjuntas	51.3	69.0	(49-73)
Mazatlán	73.0	93.2	(71-95)



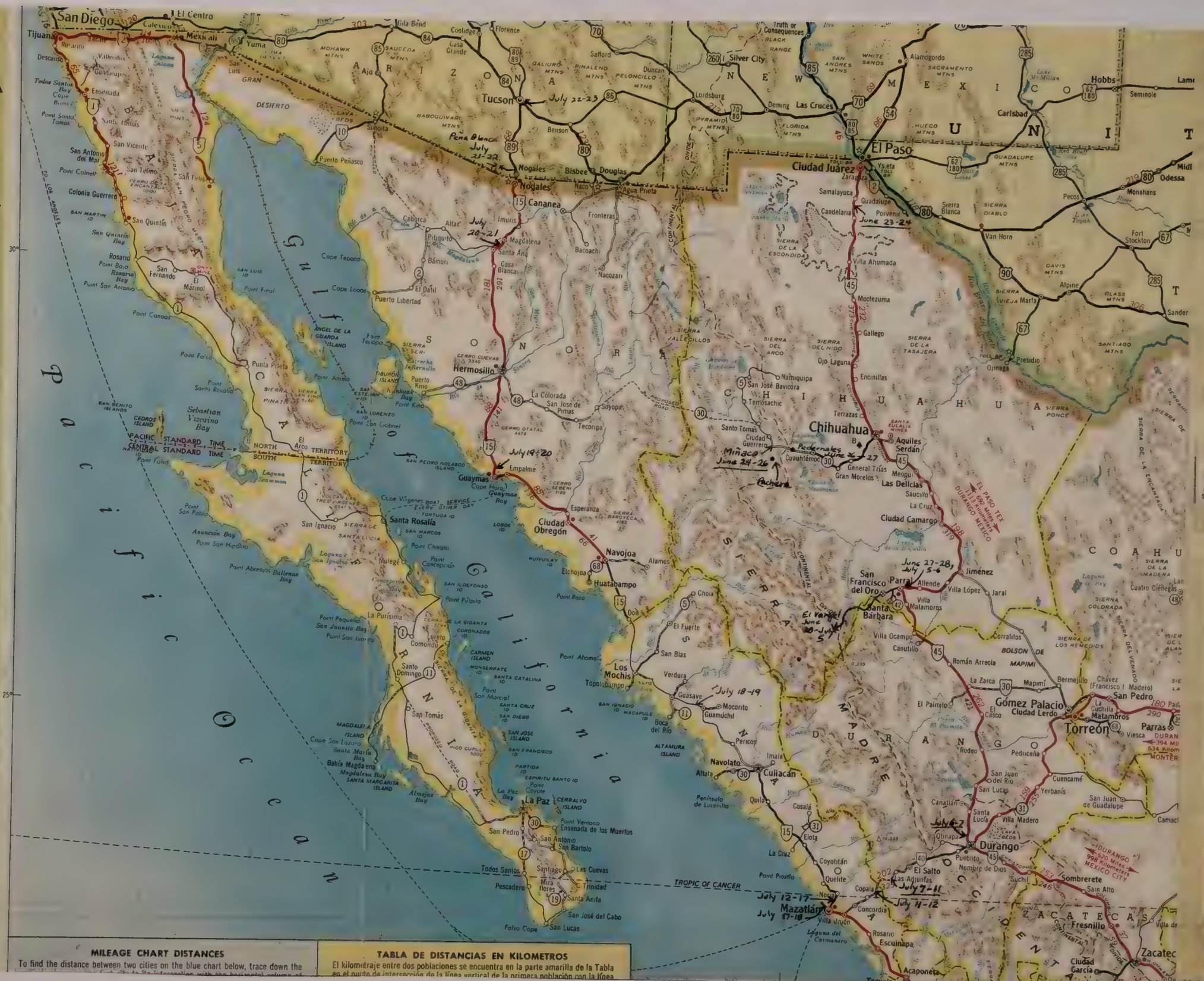
Tonatico, Mex.	F-1
Totolapan, Mor.	E-3
Tres Cumbres, Mor.	E-2
Tula, Hgo.	A-2
Tulancingo, Hgo.	A-5
Veracruz, Ver.	D-12
V. Obregón, D.F.	D-2
Xochimilco, D.F.	D-3
Xochitepec, Mor.	F-2
Yautepec, Mor.	E-3
Zacatepec, Mor.	F-2
Zacapoaxtla, Pue.	B-8
Zacualpan, Mor.	F-4
Zaragoza, Pue.	B-8

POINTS OF INTEREST

Acolman Monastery	C-3
Agricultural College	C-3
Agua Hedionda (Sulfur Baths)	F-3
Baths of Netzahualcoyotl	C-4
Cempoala Pyramids and Ruins	C-11
Chalma Shrine	E-2
Chimalhuacán Gardens and Falls	E-4
Cortez Palace (Cuernavaca)	E-2
Cuicuilco Pyramid	D-2
El Mirador Lookout	D-2
Evaporation Plant	C-3
Floating Gardens (Xochimilco)	D-3
Huexotla Archaeological Ruins Site	C-3
Idol of Tlaloc	C-4
Lecuona Gardens	C-10
Malinalco Ruins	E-2
Molino de Flores	C-4
Monument, highest point on road, Elevation 8,206	A-4
Morelos Museum	C-3
Prehistoric Ruins (Calixtlahuaca)	D-1
Ruins of Toltec Capital	A-2
San Antón Falls (Cuernavaca)	E-2
San Juan Teotihuacán Pyramid and Ruins	B-4
Santa Cecilia Pyramid	C-2
Tehuacán Mineral Springs	G-8
Tehuixtla Sulfur Baths	F-2
Tepotzotlán Church and Monastery	B-2
Textile Mills	F-9
Thermal Baths	A-3
Xochicalco Pyramid	F-2

NATIONAL PARKS

Alejandro de Humboldt National Park	F-1
Barranca de Chapultepec National Park	E-2
Cacahuamilpa Caverns National Park	F-1
Cañon del Río Blanco National Park	F-8
Cerro de la Estrella National Park	D-3
Cofre de Perote National Park	C-9
Cumbres del Ajusco National Park	
El Tepeyac National Park	
El Tepoxteco National Park	
Fuentes Brotantes National Park	
Ixta-Popo National Park	
Lagunas de Zempoala National Park	
La Malinche National Park	
Lomas de Padierna National Park	
Los Remedios National Park	
Miguel Hidalgo y Costilla National Monument	
Molino de Flores de Netzahualcóyotl National Park	
Nevado de Toluca National Park	
Pico de Orizaba National Park	
Sacromonte National Park	



MILEAGE CHART DISTANCES

To find the distance between two cities on the blue chart below, trace down the

TABLA DE DISTANCIAS EN KILOMETROS

El kilomutraje entre dos poblaciones se encuentra en la parte amarilla de la Tabla en el punto de intersección de la línea vertical de la primera población con la línea

Species Accounts

AMPHIBIANS

R. Zweifel 1953

Ambystoma rosaceum

7 mi. SW El Vergel (Tagunita) 7800', Chihuahua, Mexico
2296-2301 RZ July 1

In the stream (5' wide x 6" deep) and in pools up to 18" deep. Muddy bottom, salamander larvae usually hide under rocks in the pools.

The larger larvae are mottled black and greenish yellow, the smaller larvae have less prominent markings, the green color predominating.

The water temperature where one large larva was taken was 29.6°C.

R. Zweifel 1953

Ambystoma rosaceum nigrum

6 mi. WSW Las Adjuntas, 8500', Durango, Mexico

2375-6 RZ July 7

Near our campsite there is a hillside seep which feeds into three holes, the two larger being 4' and 6' in diameter and 2' deep, which have evidently been dug to retain some water.

A large larva and another nearly transformed were taken from these holes.

As compared to the salamanders from 7 mi SW El Vergel, these are much darker. The increase in black tends to change the pattern from a mottled one to spotting. The light coloration is yellowish-white, rather than greenish yellow.

July 10

In a spring hole 4' x 3' x 14" deep, temperature at mid-day 14.2°C. The hole is partially boarded over, and probably little or no direct sunlight reaches it. There is no algae present, whereas algae is thick in the pool described above (July 7) where several larvae have been taken.

Today's larvae are different from those collected on previous days in being much darker; the yellow pigment is practically absent. There is a line of golden guanophores concentrated along the lateral line from axilla to groin

R. Zweifel 1953

Triturus torosus

Trabuco Guard Station, Trabuco Canyon 1500'; Orange Co., Calif.

August 16, 1953

Relatively little stream flow, mostly disconnected pools. Larvae were present in the pools, and small transformed individuals under rocks by the water. I was shown an adult Triturus by some Boy Scouts; they said adults were common in the pools, but I was unable to find any.

After collecting adult Triturus in Boulder Creek, San Diego Co., in August, I had assumed that they waited for the summer rains in order to leave the water. At least one or two heavy rains are a regular summer occurrence in the Cuyamaca region. But such conditions do not obtain in the Santa Ana's. Perhaps the heavy summer fogs moisten the region ~~sufficiently~~ sufficiently to permit the adults to leave the water.

R. Zweifel 1953

Bufo woodhousi

Rio Papigochic, Minaca, 6300', Chihuahua, Mexico

2246 RZ June 25

Several of these toads were taken in and beside the river. Those calling sounded something like "WAAAAAH". According the Reimer, the B. woodhousi in the States trill — a very different call.

Larvae and newly transformed toads, presumably of this species, were found in abundance.

R. Zweifel 1953

Bufo cognatus

Road north of Durango, Durango, Mexico

2365-6, 2369-70, RZ July 6

Several of these toads were encountered on the road during the course of some 50 miles driving after dark to within 10 miles of the city of Durango.

The toads were abroad during and between showers. One male was found giving its very loud rattling call from a roadside irrigation ditch. At another spot a chorus was heard.

4.4 mi N Ciudad Obregon, Sonora, Mexico

July 19

Previously reported from only as far south as the Punta Peñasco region, this individual involves a considerable extension of range - 350 mi.

~~Thorn forest~~.

R. Zweifel 1953

Bufo debilis

11 mi. NW Vicam, Sonora, Mexico

2578-81 R2 July 19

A chorus in a roadside rain pool. The high-pitched, buzzing call is highly ventriloquial. We mistook it for *Microhyla*.

R. Zweifel 1953

Bufo punctatus

Hidalgo del Parral, 5500', Chihuahua, Mexico

2252 RZ June 27

Found at the edge of a swimming pool in a residential area shortly after nightfall. Numerous red tipped warts on a grayish-brown background. No other conspicuous markings except open marks on ventral surface like so: ○○○○.

16 mi N Durango, Durango, Mexico

2371-2, RZ July 6

Found on the road at night. Markings the same as the Parral individual.

R. Zweifel 1953

Bufo microscaphus

7 mi. SW El Vergel, 7800', Chihuahua, Mexico

2260-2, 2282 R2 July 4

Adults of this species were found both along the stream and on the dry ground by our camp, 200' from the stream. They were found active at night. No breeding activity was observed.

Tadpoles and newly transformed young, presumably of this species, were extremely abundant. Every suitable rock or log along the stream sheltered a dozen or more tiny toads. With the advent of heavier rains toward the end of our stay here, the young toad have begun to leave the vicinity of the stream and disperse into the forest. During an evening or afternoon rain, multitudes of little toads can be found hopping about.

R. Zweifel 1953

Eleutherodactylus

7 mi. SW El Vergel (Jogunita) 7800', Chihuahua, Mexico

2290 R2 June 30

Calling from a ~~on~~ crack in a boulder shortly after nightfall. The call is a monosyllabic quack, resembling that of Hyla arenicolor. The dorsal surface of the frog is pale green with numerous darker spots, the spots being dark gray. The resemblance to the lichen-encrusted rock is close. Even the iris is green

The frog gave a very few isolated calls yesterday. This evening, following this afternoons fairly heavy showers, it called regularly. The nearest surface water is the stream 100 yards away

2334-5 R2 July 2

This afternoon we had our first heavy rain since we have been here, probably the first heavy rain of the season. In the evening several frogs were heard calling. We collected three. I found a male calling from a crack in an outcropping boulder and found a large female hopping across a rock face toward the male.

At least ten frogs were heard. The call carries for several hundred yards. All frogs that were tracked down were either in rocky outcrops or on boulders nearby.

R. Zweifel 1953

Eleutherodactylus

6 mi. WSW Las Adjuntas, 8500', Durango, Mexico

2377 RZ July 7

Found on a rocky hillside after dark. The hillside is ~~rather~~ rather open, having been logged, and slopes about 30°. The rounded, granitic rocks average about 18" in diameter, though there are a few boulders 6' and more in diameter.

The frog was found resting on top of a rounded rock about 3' in diameter.

There had been a heavy shower in the afternoon, though it was not raining in the ~~afternoon~~ evening when the frogs were heard calling.

The form, color (bright green, though individually variable) and call are the same as the frogs taken at 7 mi SW El Vergel, Chihuahua.

Diaglena spatulata

2506 RZ (photo taken at Berkeley)

R. Zweifel 1953

Diaglena spatulata

9 mi. N Mazatlan, 500', Sinaloa, Mexico

2506 RZ July 13

Calling a mid-day from a snag a few inches above the edge of a temporary pool. See journal for description of pool and other anura breeding there.

Frog was sitting in bright sunlight. When captured it was green dorsaely, but later changed to a golden brown, shading into green on the sides

July 14

I took two more and Bill three by the pond in the evening. All were found in elavated situations, one on a branch on a fallen tree, the others about six feet off the ground in trees, usually on a large branch or in a crotch.

Diaglena spatulata

2506 RZ (photo taken at Berkeley)

R. Zweifel 1953

Ptemohyla fodiens

9 mi. N Mazatlán, 100', Sinaloa, Mexico

July 12,

One found on the road during a light rain in the evening.

2501-2505 & 2 July 13

During the evening, several taken on the dirt road near our camp. They were also abundant on the paved highway. Some were calling from roadside pools.

July 16

These frogs seem to be quite terrestrial. We have found Diaglena, Smilisca and Agalychnis in trees at night, but none of the dozens of Ptemohyla was off the ground. Collecting in the daytime, Bill found one in a hole in the ground, blocking the entrance with its bony head.

6.3 mi. N Ciudad Obregon, Sonora, Mexico

July 19

Calling from a small bush a few inches off the ground at the edge of a rain pool in the evening. Escaped.

11 mi NW Vicam, Sonora, Mexico

Mixed chorus of Ptemohyla and Bufo debilis in a rain pool.

R. Zweifel 1953

Pternohyla fodiens

11 mi N El Oasis (45 mi N Hermosillo) 2100', Sonora, Mexico

2592-3 RZ July 20

Calling from the edge of a roadside rain pool after dark.

10 mi N Benjamin Hill, Sonora, Mexico

Another breeding chorus characteristically located in a rain pool.

On a previous trip to Sonora (1950), much of this same country was covered at night in rainy weather, but no Pternohyla were detected. This was in mid-August. Probably the Pternohyla breed during the early summer rains and then at retire. We collected several at Guaymas, but most were juveniles.

R. Zweifel 1953

Agalychnis dacnicolor

9 mi. N Mazatlan', 100', Sinaloa, Mexico

2519-22 July 14,

Croaked on low branches of trees bordering a temporary pond in the thorn Forest. In the evening, the frogs were found giving their rather chirping call which contrasts with the more protracted croak of Dendrobates.

Most of the frogs were bright green when found (out of harmony with the gray branches on which found), but possess considerable ability to change to brown rapidly.

July 15

23 mi N Mazatlan', 100', Sinaloa, Mexico

2536-7 R2

Frogs ♀ contained pale green ova 1.5 mm in diameter.

The iris is black with pale gold flecks.

R. Zweifel 1953

Hyla eximia

7 mi. SW El Vergel (Jaguinita), 7800', Chihuahua, Mexico

2256 RZ June 28

Found beneath a rock at the edge of a stream in yellow pine forest. Ground color was brown when frog was captured, later changed to gray.

June 30

A newly transformed individual found beneath a rock at the edge of the stream. This individual is bright green.

An adult in a rotten pine log 40' from the stream. This one is green on the center of the back and gray on the sides.

A small adult was disgorged by a *Thamnophis cyrtopsis*.

2333 RZ July 2

Found an adult on a rocky outcrop while we were hunting *Eleutherodactylus* at night.

July 3

Removed an adult from the stomach of a *Thamnophis errans*.

R. Zweifel 1953

Hyla eximia

6 mi. WSW Las Adjuntas, 8500', Durango, Mexico

2382-8 R2 July 8

At least two choruses of these frogs were heard near our camp tonight, where none had been heard last night. Perhaps this afternoons heavy rains had an important part in initiating the activity

One chorus was located in the canyon bottom by the stream. No frogs were calling from the stream itself, but rather they were located in water filled depressions made by the trampling of livestock near the stream border. Seeps on the hillsides made the region rather marshy.

Another chorus was located in a muddy pool by the roadside, the largest pool being some 20' in diameter. Those frogs seen were calling from the edge of the pool, partly in the water. The call is reminiscent of that of Hyla regilla, by lacks the disyllabic quality common ~~to~~ to that species.

2 mi NE La Ciudad, 8000', Durango, Mexico

2449-70 R2 July 11

Large, grassy meadow in pine forest. Many frogs calling in the early afternoon from the grass - not in water.

R. Zweifel 1953

Microhyla

Peña Blanca Public Camp, Santa Cruz Co., Ariz.

July 21, 1953

Following instructions provided by Dr. W. Frank Blair, who collected them there last night, we went to a muddy temporary pool by the roadside.

A single *Microhyla* was calling. It is a most difficult call to locate with precision. Bill Kreimer and I sat on opposite sides of the pool (about 12' apart), each insisting the frog was on the other person's shore. Eventually it was found calling from a floating position in the middle of the pond between us. The call is a high-pitched buzz.

According to Dr. Blair, the call is different from that of either *M. carolinensis* or *M. olivacea*. He succeeded in transcribing it on his tape recorder.

R. Zweifel 1953

Hypopachus

9 mi. N Mazatlan, 500', Sinaloa, Mexico

2507 A2 July 13

Taken shortly after sunset (sky dark) on a dirt road in the thorn forest. There had been a very heavy rain earlier in the day.

Dorsal body surface reddish brown, lighter than sides, the dividing line beginning on the snout, passing through the eye, continuing diagnally over the foreleg insertion to the groin. The lateral body surface is dark gray. Upper surface of limbs same as dorsal body surface. Iris similar too. Ventral surface a reticulum of gray and dirty white.

R. Zweifel 1953

Rana

14 mi SW El Batel, 4200', Sinaloa, Mexico

2475-81 R2 July 12

Small stream, seldom more than 4 feet wide. Pools up to 3' deep, 10' in diameter. Stream gradient is relatively steep with numerous small waterfalls. Stream is on bedrock much of course. Water temp 23.5°C. Tropical Deciduous Forest, but some pines on adjacent hillsides.

Some frogs were on boulders several feet above the water, others in the water when first seen.

Dorsal coloration is brown. In light phase, the dorsolateral folds are white, contrasting sharply with the background. The lateral body wall below the dorsolateral fold is dark brown, almost black. A distinct light line from snout along upper lip, passing beneath eardrum and connecting with light lateral ventral color behind & above foreleg. Ventral surfaces white. In dark phase, melanophores on ventral surface form no definit pattern. A few small dark spots are present dorsally.

Superficial examination places this frog with the group including R. palmipes, R. macroglossa and R. sierramadrensis. The geographically closest form, sierramadrensis, occurs some 575 miles south in Guerrero.

R. Zweifel 1953

Rana aurora draytoni

Trabuco Guard Station, Trabuco Canyon, ~~to~~ 1500', Orange Co. Calif

2604-5 R2 Aug 16

Little stream flow, mostly disconnected pools.

Alders, sycamores.

R. Zweifel 1953

Rana tarahumarae

Sycamore Canyon, Pajarito Mts., Santa Cruz Co., Ariz.

July 21, 1953

Downstream from the pool pictured in Stebbins' book, where I took this species in 1950, the tarahumarae habitat is much better developed. There are many pools three feet and more in depth, great boulders bordering the pools and shade from walnut, sycamore and willow trees. These deep, shady pools with overhanging ledges which provide underwater shelter seem to provide optimum habitat conditions for this species.

Three adults were taken of six seen. Several large larvae were seen and four captured. One of those not captured had all four legs developed. No small larvae were found. Probably breeding takes place in mid-summer, the larvae taking one year to reach metamorphosis.

One large ♀ was gravid, with ova nearly ripe. A ♂ had swollen thumb pads. The other, smaller female had ova about 1 mm in diameter. Either she was post-breeding or immature.

REPTILES

R. Zweifel 1953

Dipsosaurus dorsalis

4.4 mi. N. Ciudad Obregon, Sonora, Mexico

July 19, 1953

Several seen here in the late afternoon (5:30–6:00 PM). Quite wary, running into holes in the fine sand when frightened.

See Cnemidophorus tigris notes, this date, for habitat description. Dorsal color gray. Pattern of pale tan spots, 2.5 mm in diameter, tend to be arranged in vertical rows. Each spot is partially enclosed by a brown border.

R. Zweifel 1953

Holbrookia maculata

Rio Papigochic, Miñaca, 6300', Chihuahua, Mexico

2223 RZ June 25, 14

In a wash, where it hid in a small hole in the sandy soil.

Gular region yellow, not extending forward onto the chin. Orange markings on side of face and eyelids. Rose color present in axilla and extending along the side to the groin and a little on the anterior border of the femur. The color reappears as an ill-defined stripe on the side of the tail base.

R. Zweifel 1953

Holbrookia texana

Rio Nazas at San Salvador, Durango, Mexico

July 6

2362 RZ ♂ - chest yellow, throat gray centrally with lighter spots in the periphery. Lateral belly area gray. Sides of body with rust colored spots oriented in vertical lines.

2363 RZ ♀ lateral ventral area from axilla ½ way to groin is bright orange. Center of throat orange, periphery grey, lighter spotted.

Lizards were in sandy areas away from the river proper. Surrounding country is mesquite-acotillo desert.

R. Zweifel 1953

Callisaurus draconoides bogerti

4 mi. N Mazatlan, Be Sinaloa, Mexico

2538-9 ♂♀ July 15, 1953

Found on the sandy beach just above the high tide mark. The lizards hide in burrows which look like those of Dipodomys, but seem to be those of crabs.

See next page for ventral color patterns.

2546-8 ♂♀ July 18

Six more shot this morning (three in Biemer's catalogue). Ventral coloration essentially the same except some females have red on chest, but no green.

Probably the extreme southern extent of the range of this species consists of a finger ~~extends~~ reaching down the beach and others projecting into the interior along washes. The thickness of the thorn forest would seem to be an impenetrable barrier to this species, except where washes or other areas of bare ground provide access.

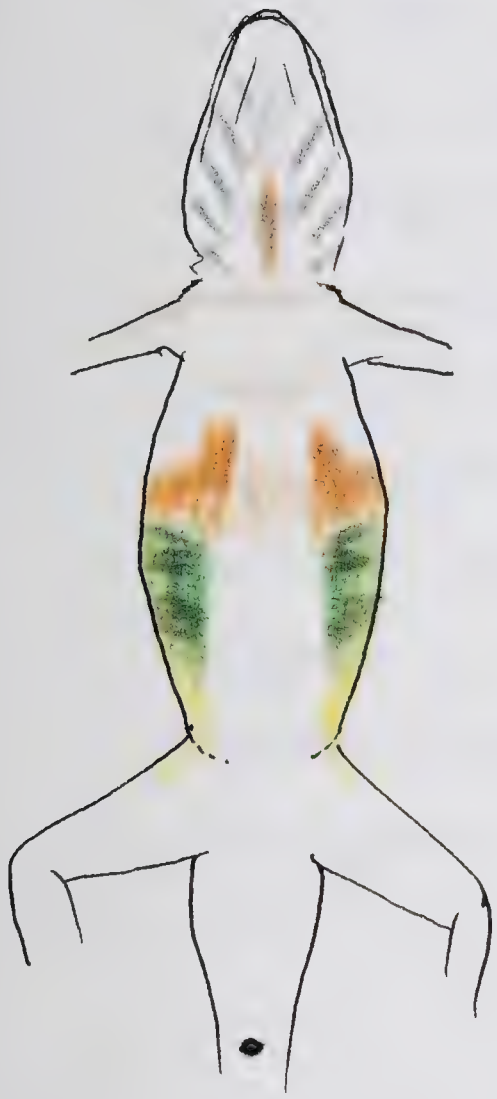
R. Zweifel

1953

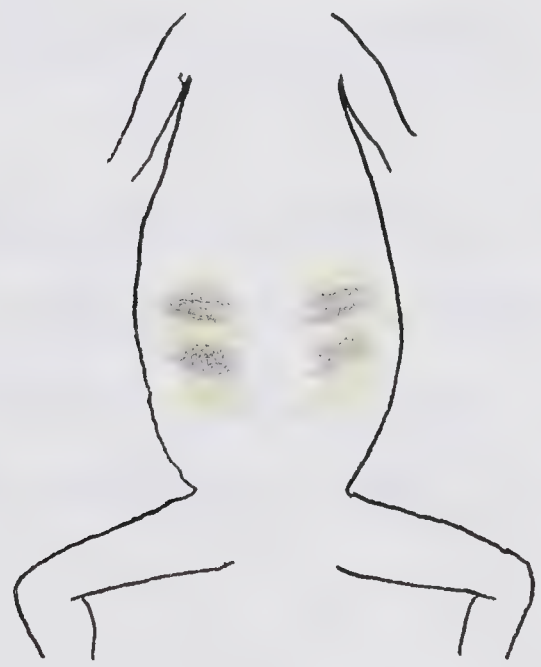
Callisaurus draconoides bogerti

4 mi. N Mazatlan, Sinaloa, Mexico

July 15, 1953



♂ 2538 RZ



♀ 2539 RZ

Note: The yellow is incorrect. Should be lemon yellow.

R. Zweifel 1953

Callisaurus draconoides

3 mi S El Oasis (45 mi N Hermosillo) Sonora, Mex.

2588-9 RZ July 20

Mesquite, palo verde and other trees with an intermixture of much cholla cactus. The trees spaced about 40' apart on the average. Much new grass and herbaceous vegetation beneath and among the trees.

The male Callisaurus found here have essentially the same ventral coloration described for C. d. bogerti, except the lateral bars are more distinct and the overlying color is more blue than green.

R. Zweifel 1953

Phrynosoma orbiculare

6 mi. WSW Las Adjuntas, 8500', Durango, Mexico

2408 RZ July 9

In an open area in the pine-oak-madrone forest on a sunny morning. B.T. 37.4°C.

R. Zweifel 1953

Scelopoms magister

4.4 mi N Ciudad Obregon, Sonora, Mexico

2574 RZ July 19, 1953

Shot on the ground beneath a bush. All Scelopoms clarki I have seen so far have been in trees. It would be of interest to see if the habitat separation suggested here is constant for these two similar species.

See Cnemidophorus tigris notes, this date, for general habitat description.

R. Zweifel 1953

Scelaporus undulatus

14 mi. NNE Chihuahua, Chihuahua, Mexico

2216 RZ June 24

Found in a well at a roadside park in hilly area at edge of wash. Scrubby oaks just coming into leaf form the prominent vegetation

R. Zweifel 1953

Sceloporus undulatus

Rio Nazas at San Salvador, Durango, Mexico

July 6

2360 ♂ Snout and top of head rusty orange. Lateral body scales emerald green. Body pattern of two ill defined light lines. Single blue throat patch, paired lateral blue belly patches.

2361 ♀ Snout and top of head yellowish brown. No blue on throat or belly.

All were found on tree trunks except one on log on ground. Trees bordering stream inhabited by Sceloporus were cottonwood and tamarisk. Also on mesquite trees several hundred yards from the river. Surrounding country is ocotillo-mesquite desert.

R. Zweifel 1953

Sceloporus grammicus

7 mi. SW El Vergel (Tagunita) 7800', Chihuahua, Mexico

2304-2315 RZ July 1

Abundant in the pine forest. Usually seen on fallen logs, log fences and stumps. Most often take refuge under loose bark.

The males possess paired blue ventral patches edged medially with black. This black edging is differently represented in the females, the rest of the venter being orange-brown. The same orange-brown coloration is present on the male ventral surface on areas not occupied by the blue and black.

The throat in both sexes is gray with many 1 mm diameter light spots, white in the female, blue in the male.

July 3

These lizards seem to be restricted to logs and stumps in level areas in the forest, where they are abundant. I have seen none on the rockier slopes.

R. Zweifel 1953

Sceloporus poinsetti

1.6 mi. W Pedernales, Chihuahua, Mexico

2248-50 RZ June 27

These lizards were found in cracks between the bricks of an abandoned adobe building in which we camped. Several dried carcasses of this species were also found in cracks.

An S. poinsetti and a S. jarrovi were seen to hide in cracks only 18" apart on an adobe wall, in interesting ecologic overlap between these two similar species. (These two were captured, so identification can be confirmed).

This is in a hilly area in the overgrazed piñon-oak association, elevation around 6000'.

A large gravid ♀ taken here has rather brilliant coloration - see drawing on next page.

14 mi by road W Ojito, Durango, in Chihuahua

2253 RZ and

16 mi by road NE El Vergel, (Tagumita), Chihuahua

2254-5 RZ June 28

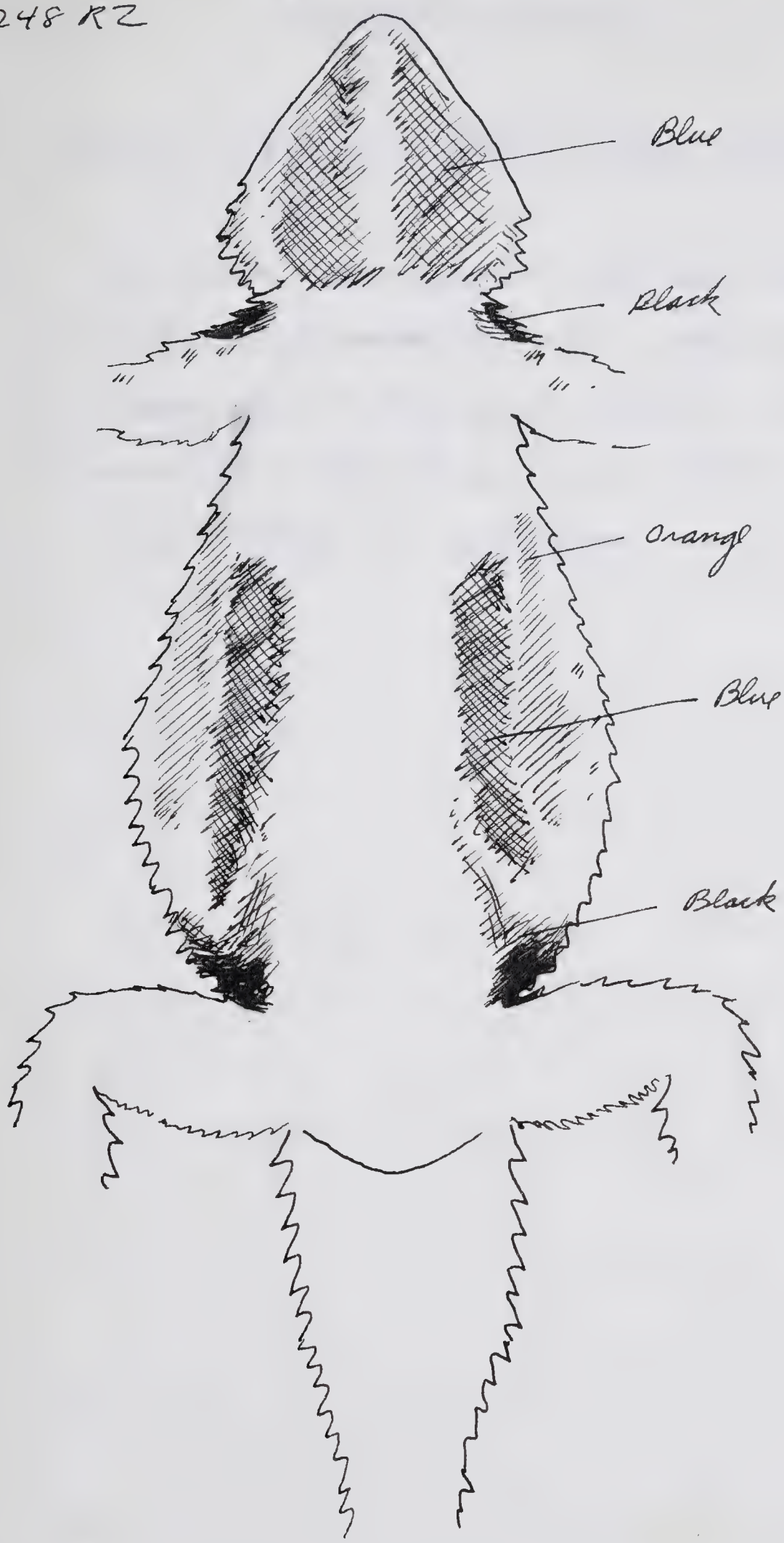
Several individuals were seen perched atop rocks in the oak scrub and piñon-oak forest, most in areas where there were many scattered rocks averaging 1' in diameter. I have in the past considered this lizard as solely a crevice-dweller, but it is certainly not confined to that habitat here.

A large ♂ possessed no orange ventually.

R. Zweifel 1953

Scaloposus poinsetti June 27

2248 RZ



♀ x 1 ventral coloration

R. Zweifel 1953

Sceloporus poinsetti

6 mi WSW Las Adjuntas, 8500', Durango, Mexico

July 11

In contrast to our earlier experience that this species associates itself ~~only~~ only with rocky situations, several have been found here under bark on stumps. The (apparent?) scarcity of S. jarrovi here may be involved in this ecological expansion.

R. Zweifel 1953

Sceloporus jarrovi

7 mi. SW El Vergel (Tagumita) 7800', Chihuahua, Mexico

2264-71, 2286, 2316 RZ July 4

This is by far the most abundant lizard here. They are relatively unrestricted ecologically, being found on rocky cliffs, boulder strewn hillsides and on fallen logs. The ecologic overlap with S. poinsetti noted near Pedernales (see species account for that form, June 27) is again evident here. The S. poinsetti restrict themselves to rocky situations (cliffs, boulder strewn hillsides, rock retaining walls). S. jarrovi and S. poinsetti were seen in the same rocky outcrop within inches of one another.

S. jarrovi is less likely to be found on logs and stumps in level areas of the forest where S. grammicus is common, but is more often seen on slopes.

R. Zweifel 1953

Eumeces brevirostris

7 mi. SW El Vergel (Tagunita) 7800', Chihuahua, Mexico

2285 R2 June 30

A hatchling found between bark and heartwood on the underside of a yellow pine log in yellow pine forest.

The tail is brilliant blue. Body pattern consists of two yellowish-white lines which begin at a common point on the tip of the snout and pass posteriorly to the base of the tail, becoming indistinct there. The head is brown, the color becoming lighter and developing a golden tint toward the tail. There are not other white lines or marks on the head or body.

6 mi. WSW Las Adjuntas, 8500', Durango, Mexico

2394-2404, R2 July 9

Found both actively running about on the ground and hidden under logs and other pieces of wood and bark on the ground in the pine-oak-madrone forest. One adult was found beneath the bark of a fallen log closely associated with a nest of large red and black carpenter ants. Ten of the skinks were taken during the sunny morning hours; one was found under bark on the ground after the afternoon rains had started.

R. Zweifel 1953

Cnemidophorus sacki

Rio Papigochic, Miñaca, 6300', Chihuahua, Mexico
2218-2222 R2 June 25

Abundant in a dry wash, where they took refuge in clumps of Baccharis. The tail color of the young is not blue, but tan.

Dull colored in general

R. Zweifel 1953

Cnemidophorus sacki

Rio Nazas at San Salvador, Durango, Mexico

July 6

Small gular scales (all excepting the enlarged series adjacent to the infralabials) reddish brown. Chest and inner side of fore leg very dark blue, almost black. Blue persists over entire venter and inner surface of hind legs in largest individuals, becoming lighter posteriorly.

Pattern of light lines barely visable in two of the three adults available, not distinguishable on the other. Light spots on hind legs yellow. Tail bluish-green.

In sandy areas bordering the river in mesquite-ocotillo desert. Lizards were usually seen in shade of cottonwood & tamarisks within a few feet of the water.

R. Zweifel 1953

Cnemidophorus sacki

9 mi. N Mazatlan, 500', Sinaloa, Mexico

July 13

Very abundant in the Thorn Forest shortly after the morning rain had ceased at about 11:00 AM. The lizards continued active throughout the day.

A lined pattern is present in the largest adults, though spotting is well developed. The dorsal field is conspicuously lighter than the lateral fields in both young and adults.

2528 RZ July 15

SV 94 mm. Paravertebral fields (there is no vertebral stripe) confluent, light brown. Lateral fields dark brown. Very little spotting. No spots on hind limbs.

R. Zweifel 1953

Cnemidophorus sacki

25 mi NW Elota, Sinaloa, Mexico

2552-9 R2 July 18, 1953

Adults have no stripes. Head gray, body spotted yellow, tail bluish-green along side. Very different from Mazatlan lizards.

In 1950 it was noted that the Guaiaiba, Sonora lizards were striped through adulthood, like those at Mazatlan, while some from near Navajoa were spotted, as these Elota lizards. The suggestion of distinct coastal and foothill forms is strengthened. Dark venters.

7 mi. W Guamúchil, Sinaloa, Mexico

2565-6 R2 July 19

Again the spotted form.

R. Zweifel 1953

Cnemidophorus tigris

1 mi. E Berino, Dona Ana Co., New Mexico

2207-2209 RZ June 23

About two hours after sunrise the lizards were first seen to become active. The region is quite sandy. The lizards are most abundant in mesquite-topped sand hummocks but judging from their tracks, do not confine their activities to the hummocks. Larrea and Yucca are present between the mesquite hummocks, but the general aspect is rather open. Uta stansburiana was the only other lizard seen. Tracks of small snakes, possibly Leptotyphlops, were common on the dunes.

R. Zweifel 1953

Cnemidophorus tigris

3.8 mi. S Samalayuca, Chihuahua, Mexico

2210-2215 RZ June 24

A sand dune area, the hummocks being crowned by mesquite. Similar to the Berino locality (see June 23) but sand dunes much better developed and no Tarea present.

In life, the lizards have a pinkish suffusion on the throat.

R. Zweifel 1953

Cnemidophorus tigris

4.4 mi. N Ciudad Obregon, Sonora, Mexico

2567-2572 RZ July 19, 1953

Collected in the late afternoon (5:30-6:00 PM) in partly cleared area of very fine soil by the roadside. Various thorny bushes and small trees do not give continuous cover; cover estimated at 40% down to much less.

The largest individual, SV- mm, has a black gular area and black venter. Two others show black chins but less extensive black on the ventral surface. Three others are white beneath. One of the dark-ventered lizards was shot while courting a white-ventered individual.

The smallest lizard, SV- mm, has six pale yellow lines on a dark background with no spots in the lateral or dorso-lateral fields. The central line is continuous on the neck but represented only by a series of dots back to the pelvic region.

In the larger individuals, the central stripe tends to be continuous back to the base of the tail. Only the faintest suggestion of spotting is present in the lateral field. The whole coloring is much browner, the stripes being less distinct.

R. Zweifel 1953

Lampropeltis getulus splendida

1.4 mi. N Morcillo, 6300', Durango, Mexico

2373 RZ July 6

Found on the road at 11:00 PM on an evening of intermittent showers. It was not raining when the snake was taken. It disgorged a new born mouse. This species has not previously been reported from this state.

R. Zweifel 1953

Masticophis flagellum

3 mi S El Oasis (45 mi N Hermosillo), Sonora, Mexico

2591 R2 July 20

Seen crawling off the highway at 5:30 PM. The heat of the sun was slightly alleviated by some clouds.

Anterior 2/3 of the body black, posterior red. In the black area there are traces of red rings reminiscent of the paired white rings present on the red background of the race (cingulum) which Jawe and Wasdin are describing from Moctezuma.

R. Zweifel 1953

Masticophis taeniatus ornatus

1.3 mi. N Pachera, 6500', Chihuahua, Mexico

2247 RZ June 26

Seen sticking its head out of a rock pile by the roadside in an overgrazed piñon-oak forest.

The light + dark crossbanded effect is strong on the anterior 2/3 of the body. Venter suffused with gray. Sub caudal surface ~~yellow~~ red, fading out anteriorly on the last 30 ventrals.

R. Zweifel 1953

Pituophis catenifer

Rio Nazas at San Salvador, Durango, Mexico

2364 RZ July 6

Large adult. General all over color is yellow-brown. Blotches are yellow-olive anteriorly, becoming brown on the tail.

139 mi. N Mazatlan, to Smalog, Mexico

2543 RZ July 16

Fresh DOR in the evening. Thorn Forest.

R. Zweifel 1953

Rhinocheilus lecontei antoni

20 mi. N Mazatlan, Sinaloa, Mexico

2535 R2 July 15, 1953

Dark blotches are blue-black. Interspaces largely red with a very fine yellow edge. The red does not continue across the ~~dorsum~~ ventral surface. Dark blotches spotted laterally with yellow.

R. Zweifel 1953

Salvadora hexalepis

9 mi. N Mazatlán, 100', ~~Sonora~~ Sinaloa, Mexico

2532 ♀2 July 15

Active in the Thorn Forest near our camp in the afternoon. Species recorded previously from northern Sinaloa.

R. Zweifel 1953

Thamnophis cyrtopsis

7 mi. SW El Vergel (Jaguinta) 7800', Chihuahua, Mexico
2288 RZ June 30

Orange dorsal stripe, yellow venter, red tongue except black forks.

Found during a sunny lull between showers in the afternoon in the forest not near (200' away) the stream. Had eaten a *Hyla eximia*.

F. Zweifel 1953

Thamnophis eques megalops

Rio Papigochic, Miñaca, 6300', Chihuahua, Mexico

2224-2236 RZ June 25

Very abundant. Many were seen in the water, others taken under rocks at the stream border. Had fed on newly transformed Bufo.

The dorsal stripe is yellow in most, orange in a few.

7 mi. SW El Vergel (Tagumita) 7800', Chihuahua, Mexico

July 2

Two large females taken today were gravid, one giving birth to seven young shortly after capture. Probably this is not the full complement – others may have been born before capture.

R. Zweifel 1953

Thamnophis ~~cyntopsis~~ errans

7 mi SW El Vergel (Tagumta) 7800', Chihuahua, Mexico

2273-4 RZ June 29,

These snakes have a yellow dorsal stripe and reddish-brown venter (excepting the pale yellow chin). Of four taken so far, only one was near the water, the others in the dry pine forest.

July 1

2303 RZ

Under a log in pine forest far from water. This species has a tongue which is all black in life.

2340 RZ July 3

A newly born individual doesn't have the reddish-brown venter, but the all black tongue still serves to distinguish it from T. cyntopsis which it otherwise rather resembles.

R. Zweifel 1953

Thamnophis melanogaster

Rio Florido at Camitillo, 6100', Durango, Mexico

2359 R2 July 6

Dorsal stripe pale brownish yellow, distinct to the base of the tail. Dorsal body surface dark brown. Venter pale yellow anteriorly, developing a grayish suffusion posteriorly. Row of scales below lateral line gray. Tongue black except for basal area which is flesh colored.

R. Zweifel 1953

Thamnophis sufipunctatus

Rio Papigochic, Miñaca, 6300', Chihuahua, Mexico

2237-4; RZ June 25

All five which I obtained were found beneath rocks at the stream edge in the daytime. Bill Riemer got one last night in the stream. In contrast to the T. eques found under rocks in the daytime, the T. sufipunctatus were sluggish, as if just awakened.

Most of the sufipunctatus have reddish spots on a gray-brown background. One has dark brown spots on the same general background as the others.

7 mi. SW El Vergel (Jaguinita) 7800', Chihuahua, Mexico

2287 RZ June 30

Beneath a board at a stream border in the yellow pine forest in the afternoon.

July 1

2302 RZ

Found in the stream in the morning.

R. Zweifel 1953

Crotalus molossus

7 mi SW El Vergel (Tagunta) 7800', Chihuahua, Mexico

2341 RZ July 3

While hunting Eleutherodactylus on a rocky outcrop after dark, a rattler was found crawling slowly over the rocks only about three feet from where the frog was calling. The rocks were dry, although the ground was damp from the showers of the afternoon and early evening. The air temperature at camp was 60° F a few minutes after the snake was captured, and probably close to that at the site of capture. The snake felt cold to the touch.

General coloration brown, tending toward olive on the sides. Diamonds yellow. There is a very faint indication of rings on the tail beneath the black.

R. Zweifel 1953

Crotalus pricei

7 mi. SW El Vergel (Tagunita) 7800', Chihuahua, Mexico

2275 RZ June 29

A small rattler, well battered, was brought in this afternoon by one of the Mexicans. We were informed that it had bitten a muchacho this morning. In the evening the bitten young man appeared together with a dozen others, indians (as himself) and Mexicans. (The purpose of the visit was to sing and make merry – not to show off the foot which was bitten).

The man had a tourniquet about his calf, the bite having been given on the upper surface of the foot near the little toe. Some swelling was evident but no discoloration was seen. I gathered that some treatment had been given at El Vergel.

Considering the small size of the snake and the tough, grime-encrusted foot bitten, probably little venom was injected.

~~June~~ July 1

The indian was back again tonight, looking none the worse for his bite.

2342 RZ July 4

A small individual found coiled beneath a 9" diameter log on dry soil in level, open yellow pine forest.

R. Zweifel 1953

Crotalus pricei

6 mi. WSW Las Adjuntas, 8500', Durango, Mexico

2405 RZ July 9

At about 9:30 this morning this snake was seen to crawl under a rock on a sunny, exposed (due to logging) slope. The snake escaped into the rock rubble, but when I returned about three hours later it was again out sunning and was captured this time.

2414 RZ July 10

Jerry chased one under a rock on a rock-rubble littered hillside. When I returned to capture it, it was sharing its abode with a skink (E. brevirostris). The attraction of the brilliant blue tail was such as to make the rattler even more inconspicuous, and could easily have had unpleasant consequences had I not been specifically expecting the snake at that spot. The snake proved to be a gravid female, with the embryos quite far along.